

Name: _____ Period: _____ Date: _____

Algebra II GHP

Practice 6-4A: The Quadratic Formula WS 5

A. Evaluate the discriminant of each equation and use it to determine the number and nature of the solutions. (The discriminant is $b^2 - 4ac$).

1. $x^2 + 10x - 25 = 0$

2. $x^2 + 10x + 10 = 0$

3. $4x^2 - 4x + = -1$

4. $x^2 + 4 = -3x$

5. $6x - 4 = 5x^2$

6. $x^2 = -12x - 36$

B. Use the Quadratic Formula to solve each equation. $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

7. $x^2 + 6x + 9 = 0$

8. $x^2 - 15x + 56 = 0$

9. $3x^2 - 5x = -2$

10. $10x^2 - 23x + 12 = 0$

11. $x^2 = 3x + 2$

12. $x^2 + 6x - 4 = 0$

13. $3x^2 + 7 = -6x$

14. $2x^2 + 6x + 4 = 1$

15. $5x^2 + x + 3 = 0$